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The Photographic Times

An Independent Illustrated Monthly Magazine Devoted to The Interests of Pictorial and Scientific Photography.
THE PHOTOGRAPHIC TIMES PUBLISHING ASSOCIATION.
39 UNION SQUARE. NEW YORK CITY

Monthly Photographic Competitions for 1907

Prizes will be awarded as follows: First prize, $10.00; second prize, $5.00; and three honorable mention awards of a year's subscription to "The Photographic Times."

CONDITIONS

The competition is open freely to all who may desire to compete, without charge or consideration of any kind. Prospective contestants need not be subscribers for the publication in order to be entitled to compete for the prizes offered.

Prints in any medium, mounted or unmounted, may be entered. As awards are, however, partly determined on possibilities of reproducing nicely, it is best to mount prints and use P. O. P., or developing paper with a glossy surface. Put name and address on ***back*** of each print, and prepay postage at the rate of one cent for each two ounces.

Send particulars of conditions under which picture was taken separately by mail. Data required in this connection: light, length of exposure, hour of day, season, and stop used. Also materials employed as plate, lens, developer, mount and method of printing.

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FEEDING THE PIGEONS *By Guido Rey*

The Photographic Times

VOL. XXXIX MARCH, 1907 No. 3

GUIDO REY—A MASTER OF DETAIL COMPOSITION.

BY SIDNEY ALLAN.

THE more I look at pictorial prints, the more I come to the conclusion that the majority of "successful" photographs are the result of accident rather than of any distinct evidence of artistic feeling and execution, or in other words that they are chance pictures. If a camera worker shows me several dozen pictures and only a few—as is often the case—reach a reasonable standard of excellence, probability points to those two or three pictures as a result of mere chance, as a mere happening that proves absolutely nothing as to the ability of the maker.

This became particularly clear to me when I sat for my portrait at the studio of one of our best known amateur portraitists, a man who can boast of an international reputation. He made twenty-nine exposures in order to produce one satisfactory result. Would it not be quite logical to argue that said picture was the product of experiment rather than of a masterly application of art laws. In photography, number is the supreme test of skill. If a man exhibits ten pictures, nine of which are merely matter of fact records, and the remaining one fairly artistic, it is reasonable to suppose that the one is a chance picture If, on the other hand, another man exhibits twenty pictures that all show artistic composition it is equally reasonable to suppose them to be the work of an artist.

On my desk before me lies at this moment a small collection of prints by Guido Rey,—an Italian worker—(semi-professional I suppose) which records this uniformity of excellence. I have lived with them for a few days, and I have found in them considerable knowledge of composition, skill in artistic treatment, and a rare appreciation for the details of life—faculties that can be due only to a mind which after hard fought struggles, slow artistic growth, and long years of observation has finally gained the power to materialize his imagination.

From the tonal point of view—the accepted standard in recent years—the prints of Guido Rey show but little merit, but as he has said himself in a letter to the editor, he strives for different ideals. He considers detail and transparency the most important features of art photography, and a man with such convictions can naturally not enter the field of tonal competition with any sort of success. The tonalists strive for blurred effects, and the elimination of detail. Guidó Rey sacrifices breadth of expression for subtler effects of lights and lines.

THE CAGE OF THE BLACKBIRD *By Guido Rey*

One of the principal merits of his work seems to me to be in his choice of subjects. Our American amateurs are favorably known for their excellent workmanship, but there is an appalling dearth of interesting subjects in most exhibitions. I have a vague recollection of a recent exhibition that contained at least twelve figure compositions, in which showing brass vessels and crystalballs played the most conspicuous parts. Surely this world does not consist entirely of brass vessel collectors and crystal ball gazers. The latter may be a very aesthetic occupation, but is it not a rather whimsical excuse for the making of a pictorial masterpiece? This lack of appreciation may be entirely my fault, but I cannot help myself. I prefer a man who has something to say or convey, and I find it refreshing, to say the least, to come into contact now and then with a photographer who has ideas like Guido Rey.

This man of Turin composes his pictures like a genre painter. All his prints reveal a thorough knowledge and study of that popular branchof painting. Some are slightly imitation, as for instance: The Encyclopedist" which reminds of Meissonnier and "Feeding the Pigeons" which looks like a reproduction of an Alma Tadema or a Coomons, while others like the "Ciociara" and the "Morning Prayer" show true originality of pictorial conception Yet no matter whether they are the products of skilful adaptation or careful invention, they invariably have a charm of their own, a certain poetical suavity which roots in personal feeling and ability.

Let us now take up each print separately and dwell upon the principal merits

MORNING PRAYER *By Guido Rey*

LADY TYING HER BONNET *By Guido Rey*

and short comings in each case. The "Morning Prayer" is exceedingly delicate in treatment. A man who can drape a figure in such an exquisite fashion and yet at the same time historically accurate, avoiding all theatricality of effect, must have a strong poetical vein in him With the conception and the placing, no fault can be found. Also the light, (I suppose artificial light) is well concentrated the only objection I have is that the outlines of the figure and the drooping veil should not be so abruptly lost in the darkness of the right hand corner. A faint indication of the form would in my opinion help the composition. A pity that he did not use real flowers instead of artificial ones. This is an infinitesimal detail, but a photographer who prides himself on his handling of detail should consider everything that might make his picture more perfect.

The next picture that we have to consider is "The Cage of the Blackbird." It is one of the very best. Its simplicity alone is convincing. The feeling for straight lines, in particular of the vertical ones, are unusually pronounced in this composition, but the little hooded and aproned figure is so well placed, that it destroys every trace of awkwardness and angularity. This is further helped by the distribution of light. The dark floor and the semi-darkness of the big stretch of wall with the black lines of the frame perfectly balance the light that comes pouring in through the window. In this case, however, the highest light merely strikes the lower part of the figure, the principal part of interest, the hand opening the door of the cage is emphasized by the greatest accumulation of detail, the linear arrangement of the cage, and the manner in which the tiny pot of flowers is utilized to hide the angle formed by wall and window sill is a master touch of which only a man with an artistic knowledge is capable of.

The "Lady Tying her Bonnet" is not half as carefully composed as the pre-

LITTLE GIRL READING *By Guido Rey*

ceding print, it is beautiful only in parts, notably in the way the model is costumed, and posed. The principal fault of the picture is that its vertical and horizontal lines are all out of perspective. The left side of the picture holds its place, its vagueness helps the figure, but the arrangement of objects on the table and window sill is not up to his usual standard. It is too confused.

Excellent in every detail is his "Little Girl Reading." I consider it the masterpiece of this little collection. Notice how well the space is divided in regard to light and shade, how the flowers break the monotony of the curtain, how beautifully the hand rests on the highly illumined pages of the book. The little girl is poring over some picture book. This is the subject of the picture, the reason why it was made, and the eye of the beholder is lead straight to the main object of interest, the book, from there to the exquisitely posed hands and the silhouette of the little girl's face. Then the eye is caught by the over-hanging flower, and in a circle taking in the other flowers, the vase, and the crystal bowl, returns to the book. Only gradually one discovers all the charming details, the elaborate costume of the girl, the arrangement of the cushion, the little picture which hangs just at the right spot, and the peculiar line arrangement and diffused light effect of the window. This picture is a triumph in the mastery of detail, without spoiling the general effect of the picture.

Rather trite in subject is his "Encyclopedist." We have seen that kind of picture so often, that most of us will pass it with a shoulder shrug no matter how well it is done, and yet this picture, as far as composition is concerned, is one of the best Guido Rey has produced. Only to mention one instance, observe how

well the empty space on the left side of the picture is filled by the reclining back of the chair. A decided shortcoming in the treatment, however, is the lack of transparency in the blacks of the man's coat, furthermore, the line formed by the map and the canvas behind the table should be more subdued.

"Feeding the Pigeons" is equally successful in the handling of detail, but the composition is not quite as satisfactory. The interest is too divided. The little Greek child, the pair of pigeons, the table with the still life in the background, all absorb an equal share of attention. The picture is spotty, and the eye errs restlessly from one object to another. The large light space in the upper part of the picture may possibly help to convey the impression of sunlight but does not balance well with the rest of the picture. Some tall object, where the bottle stands, would have helped the composition. Not too much in praise, however, can be said of the loving way in which all the minor objects are treated. There are few photographers who could pose and drape a figure more simply and artistically than Guido Rey in this little Greek child study.

Truly Italian in character is his "Ciociara." The true meaning of the picture, perhaps one of local interest is difficult to discern. All that concerns us is its pictorial quality and significance. The pose of the peasant woman, holding so picturesquely her huge basket while her eyes sweep over the distant valley, is superb. It conveys to us a feeling of outdoor life, among the hills of Piedmont, the native country of the artist photographer. Too bad that the sky is so empty and meaningless. How easily a sky could have been faked in that it would have enhanced the beauty of the scene. But

THE ENCYCLOPÆDIST *By Guido Rey*

THE BOWL OF MILK *By Guido Rey*

Guido Rey never *retouches,* and it is perhaps well that he sticks to the rule that he has laid down for himself. With him everything depends on premeditation and pre-arrangement, he strives to get the final result in the exposure without further manipulation. One can only respect him for this determination, and I who have always advocated straight photography welcome him as a true exponent of my theory.

A pretty conceit is also his "Bowl of

CIOCIARA *By Guido Rey*

Milk," and it might belong to the very best of his pictures, if there was more differentiation of values, and the floor, mantelpiece and wall not of the same uniform tint. As it is, figure and accessories are seen almost as silhouettes, and the feeling of space which every interior should convey is spoiled thereby. On the other hand, if the photographer wished to produce a flat poster-like effect, the lineal arrangement should have been more strongly accentuated.

"Reading the Bible" is a good example of the so-called "full-face" composition. The subject demands concentration, and there was no other way but to make the arrangement a symmetrical one. This was done not merely by placing the figures in the centre and by balancing the tulips with the hour glass, but by giving the shape of the picture an archlike effect. The concentration of light towards the side of the little girl, and the vagueness of objects in the background are handled with the true understanding for pictorial effect.

I believe I have amply proven that the work of Guido Rey is exempt from the element of chance. When he sets out to make a picture, it is all ready in his mind, he may not always succeed in realizing, it but even his weakest effort is not accidental, but the product of a trained and sensitive mind, and if we agree on the point that the final test of a photographers ability is the production of a *number* of artistic pictures, then Guido Rey is entitled to the highest honors as he has shown by numerous and varied examples that he is a master in the application of art laws.

READING THE BIBLE *By Guido Rey*

CATTLE ON THE HILLSIDE *By A. Haddock*

GETTING RESULT.

In Six Parts. Part IV.

BY C. H. CLAUDY.

THE end and aim of photography is the print. Any kind of a negative which gives the kind of a print you want on the paper you want it is a perfect negative. If you want a weak, washed out fuzzy detailess smudge, for any fell foul purposes of art or exhibition, and get it, knowing what you were after; that particular negative, which gave it to you, is a perfect negative, *for its purpose* no matter how poor besides some other standard.

I believe the most important thing to learn in photography is correct exposure By "correct exposure" I mean the exposure which will give you what you want. But it can only be learned, each man for himself, by trial and error rules, because I can't tell, nor can any body else, just what every man wants, or what he wants it of. Show me a given set of conditions, on a given subject and I can usually hit near enough to the exposure to get what is wanted,—so can thousands of other photographers. But I can't see you and your conditions through this magazine, and so, as per my previous papers in this series, I can only give you general rules for finding out about your own exposures.

Development is a little different. To begin with, it is the next most important thing after exposure, to my mind, I have shown you how to go about trial and error development, that is, tentative development. I have promised to talk about tank development.

It is not so very long ago that I walked in darkness photographic regarding the subject of development. Eastman Kodak Developing machines and the published account of Messrs. Hurter and Driffield changed all that. I distrusted, but tried, tank development. I became interested, and tried it again. Then I made a lot of experiments. I very shortly came to the conclusion that I was one of a million mistaken photographers who believed in tentative development, they were doing things which as a matter of fact they wern't doing at all. Several years further experience has convinced me still more, if that is possible, that tank development is the only kind worth bothering with for normal negatives, under normal conditions. I introduce this subject thus at length because I want to impress those who honor me with their attention that it is worth looking into. For those who are interested, there are lots of books and published papers. This is not the place to tell the why, only the how. But I want to make sure you know I believe thoroughly in the why.

Tank development is nothing more or less than letting your plates develop for a given time, in a given solution, at a given temperature. It doesn't matter much whether the plates are actually in a *tank,* that is, a light tight box in which the plates stand on edge, or whether they are in a covered dish lying flat,—as far as the principle is concerned. The on edge way accommodates more plates at a time, and the solutions oxidize less quickly than the flat dish way. On the other hand, in a flat dish, plates can be developed for a longer time (weaker solution)—with pyro, than upright, for a purely physical reason.

If you, with no other equipment than the ordinary dark room appurtenances,

which to test tank development for yourself, proceed as follows: Expose two plates, as nearly normal as you can, on a good brisk subject with plenty of light and shade and contrast without harshness. Develop one of these plates as best you know in your usual solution.

Then take twelve ounces of water. Dissolve in it 90 grains of sulphite of soda, and 60 grains of carbonate of soda. Make all ready for developing the other plate, having a cover ready for the dish, —a piece of card board will do. Throw in and stir up 30 grains of pyro, and at once pour the whole solution of chemicals over the plate. Rock for an instant, see that there are no air bubbles, cover the dish, and *let it alone* for exactly five minutes. Don't look at it. Don't let any light hit it, red or otherwise. Keep the cover on. At the end of five minutes remove, rinse and fix. Compare the two negatives. If your exposure has been within a thousand per cent. of right, either under or over, the tank negative will be the best. One important point, belonging at the beginning, I have saved to the last. The temperature of the solution must be in the neighborhood of sixty-five degrees F. It absolutely must not be lower than sixty or higher than seventy at any time during the development, if good results are to be had. Use a thermometer.

This is tank development in the rough. Refined, we use a tank insead of a dish and dilute the solution from four to eight times, increasing the amount of time with each dilution. Thus, the above named and quantities of chemicals, with forty-eight ounces of water takes twenty minutes, with ninety-six ounces of water, it requires forty, etc, etc. And the greater time is the better for abnormal exposures—over or under. Hence, I would certainly advise the purchase of a tank, —they cost but little.

There are other formulas, lots of them. Some are good, others are not. As a general rule, I do not think the organic formula works as free from fog as the pyro, but there are, I am told, exceptions, notably glycin. However, it is here a case of practice, not of chemicals.

The advantages of tank development, as I find them are,—little if any tendency to over-development,--not too strong contrasts, no fog, the best results from any exposure, no thin negatives resulting from under development which was *apparently* finished, less trouble, and saving of time. Twelve plates in twenty minutes, all with no finger marks, cuts or abrasions as evidences of hurry is certainly fast enough for any one.

Now for correction of troubles of wrong development. You will probably not try tank development, in spite of what I say, for some time to come. You are too imbued with the old idea. I haven't the least objection,—I am only sorry some one didn't take me by the neck and chuck me into a tank ten years ago, and so, I regret that I can't do that little *jiu jitsu* performance for you.

Under developed negatives are thin and flat and have normal detail. Over exposed negatives are thick and hard to print. The one needs intensification, the other reduction.

There are a dozen or more intensifiers on the market. Mercury is the most common and gives a dense intensification, but sometimes spots and streaks, and has the name of being unstable. So has uranium, which turns plates red, with an occasional pin blue spot, but it is a dandy intensifier for all that. Probably the most satisfactory intensifier is the one which comes put up ready for use. One uses intensifier so seldom, compared to the reducer, and the process, at best is so unsatisfactory, in the long run that it hardly pays the average ama-

teur to keep the solution in stock. I suppose a dozen old timers will now arise and slay me, but it is fact, in my mind at least, intensification is an expedient, not a process.

Reduction is usually carried on by one of two methods. The persulphate of ammonia method which decreases contrast by attacking the high lights first, and Farmer's method, which attacks all the plate equally, and so increases contrast by killing the half tones into shadows while the high lights still remain high lights.

Both have their uses, but persulphate is the more uncertain of the two in its action. Farmer's is a mixture of one part of one to four hypo and one part of saturated red iron prussiate of potash to ten parts of water. Plate is soaked in this, under constant motion on coming from the hypo until thin enough when a quick washing stops the action. It is about the only reducer which works equally well whether the plate be free from hypo or not.

Personally, I would go to almost any trouble to make a new plate, rather than intensify, and I rarely have to reduce because I use tank development. In treating of these two things, intensification and reduction, in this Getting Results Series, I am bowing to a popular notion, that they belong to photographic instructions, as partial payments is an integral part of the school arithmetic of well-cursed memory. Could I be courageous enough to follow my own ideas, I would have said nothing about either, either now, before, or later.

The duty performed, however, let us return to tank development, which will obviate most of the need of the two unreliables, intensification and reduction. Supposing you have bought your tank. The first thing is to clean it,—using a very little muriatic acid in a good deal of water and brush. The less red light strikes the plates, the better they will be. Thus, set the rack in which the plates go, in the tank, upon the table in front of the light so that the plates will be edgeways to the light. If the plates go directly into the tank (and by the way, the tank with the removable rack is the best kind) set the tank up so the plates go in edgeways to the light just the same. Insert plates quickly, turning all the sensitive faces one way, for convenience. Have your solution all made up in advance, of the proper temperature, saving the dry pyro, which you must measure out and have ready to dump in at the last minute. Having all the plates in the rack, put the pyro in the tank with the solution and stir for an instant with a glass rod. Insert the rack and move up and down half a dozen times, not too fast, to break air bubbles. If you have a self-contained tank, into which the solution is to be poured through a tube at the outside, shake the tank a little after the solution is in, to break bubbles. Note the time as soon as the lid is on, and occupy yourself with other things until the proper time elapses. Don't bother to look at the plates before fixing. The right time for the right temperature, which your instructions of formula will tell you, has done the best which can be done with your exposures. If you do not like your results, do not be disgusted with the system, but modify the factors. If plates are too full of color, increase sulphite. If too strong, try shorter development. If too weak try longer. If strong and thin, try longer exposures. I do not pretend to say that all systems or my system, will suit every one.* But, once the development and time are adjusted to any one man's desires, that system will give him more results, and

*(Formula for 20 minute development is that published by Eastman Kodak Co.)

better results in the long run, than any other.

Now for the exceptions. A badly under exposed plate will give a better *looking* print, although an incorrectly rendered one, if developed strong, than if tanked. A plate which is *known* to be over exposed before development can be improved by developing in a strongly restrained solution restraining being done with from ten to fifty drops of ten per cent. solution of bromide of potash. But, let me ask you, if you know a plate is under or over exposed, before it is developed, you must have known it or suspected it when you made the exposure —why then, did you make what you knew to be an incorrect exposure? That is the weak point in the argument of the "tentativeist,"—he claims he can do heaven and earth with a negative if he knows before-hand what the negative is as regards exposure—the facts of the matter are he seldom or never does know He knows as soon as he sees it come up in the dish, of course, but the *scale has started then* and restraining or accelerating affects all the scale at once. It is only before the scale is started in development that the restrainer has its effect, and it is thus that dilute developer for under exposures has its effect,— getting in its work from the start, and not after the plate has begun wrong. And it is a dilute developer every time to take care of moderate under exposures, when the tank is used, and as stated, the tendency to over development is very small. Moreover, what is usually called over-development is simply an undue thickening of the deposit all over, due to too long an immersion,—it does not, within limits, affect the scale of contrast—*providing the exposure has been within limits of correctness.* If a too thick negative *prints* with too much contrast, it is a sign of *under exposure,* not caused by over-development Such a negative, developed by hand, would not be too thick, probably,—but it would lack all the half-tones, brought out by the long develop ment and would undoubtedly not yield nearly so good a print as does its mate from the tank. It is a little puzzling, I must confess, to distinguish between errors in the tank work and errors in the exposure, but if you will take my word for it,—the word of some little experience,—it is the exposure in ninety-nine cases and the tank in one, which is at fault, when the tank properly worked and attended to, fails to give the proper results. Can you, or any one, say as much for hand development?

The next thing after the negative, is the print, and the print and how to get a result with printing material will be the subject next month. I have already told you about gas light printing, (see PHOTO TIMES of September, October and November, 1906,) so I will take up solio and platinum, blue prints and self toners, as being, next to velox, the papers most commonly used.

Those of you who have followed this series have, in four papers of instruction, learned to make and develop a negative which will give a good print. If your photographic knowledge is limited to the contents of these papers, you know but little of the whys and wherefores, but I believe you do know how to do what you have done,—so that you can do it again and again; and it seems to me that the pleasures of photography for the majority are in the hows, and the results, rather than in the causes and the reasons.

NEGATIVES AND THEIR PRESERVATION.

BY MATTHEW WILSON.

THE ease with which, in comparison with the operations employed under the system which it superseded, photographs are nowadays produced by the gelatino-bromide dry-plate process, the saving of time effected, and the remarkable simplification in the necessary manipulation brought about by its introduction are facts which, in practice, are so generally appreciated as advantages, that there is, it is to be feared, among present-day photographers a tendency to forget or ignore the dictum that the true criterion of success is to be sought in the attendant results without taking into consideration the special processes—improved or otherwise--by which these have been produced. Judged from this clearly defined and practical standpoint, the verdict on the average work of the modern or dry-plate school must needs be an unfavorable one. Whilst it is difficult to assign in every case a sufficient reason for the shortcomings here referred to as observable in this class of work, the general conclusion seems inevitable that the standard of excellence formerly maintained is falling precisely in proportion as the demands upon the operator's skill, intelligence, and attention are becoming less arduous and exacting.

Such conclusion may at first sight appear to present the elements of a paradox, but on a closer examination one is forced, however, reluctantly, to admit its essential validity.

The main cause of the deterioration noticeable in the majority of cases where the gelatino-bromide process is employed is doubtless to be sought in the changed conditions under which the worker's task is performed. Unlike his predecessor of a generation back, he has not, so to speak, to act as a pioneer in the extensive and almost unexplored field of photographic knowledge, nor is he, as were the operators of the earlier schools, compelled to devote and direct his whole mental faculties to the mastering of his subject in its various branches and details. The series of delicate and hazardous manipulations formerly considered necessary to the production of the photographic image has been discarded in favour of an improved and more readily practicable system of treatment, under which the daily routine of the dark room has been rendered much less irksome than it was in the days of the collodion process.

In practice, however, the consequences resulting from the changes thus introduced have not been entirely of a beneficial character. The mere fact that his difficulties have been removed and his working methods facilitated, has, I think operated seriously to the photographer's prejudice. He does not now—at least, as a rule—bring to his task the same care as of old, but performs it in a manner more or less mechanical, adhering strictly in general to the lines laid down by the accredited authorities of his profession. From the stage here represented of unreasoning acceptance of a formula to the stage whose characteristics is carelessness pure and simple is but a step, and moreover, as a very superficial examination of prevalent methods will suffice to show, a step taken daily with increasing frequency, and one the serious consequences of which do not appear to be adequately realized.

If we bear in mind that in passing our strictures we are entitled to criticise only that class of operations performed in the

dark room, a class represented by the process of development, fixing, reduction and intensification, these considerations serve, I think, very effectually to account for the indifferent quality of much of the photographic work of the present day.

It is curious to note that, though the existing reaction in favour of the platinotype and carbon-printing processes has been brought about more from a growing appreciation of the advantages due to the permanence of the resulting prints than from any special preference exhibited by the general public on aesthetic grounds for the pictures so produced, very little attention has hitherto been devoted to that more important topic, the permanence of the negative. Now it is undeniable that those who in their printing operations exclusively employ the two processes above mentioned form as yet a very small minority of photographic workers, whilst it is equally beyond question that, for a considerable time at least, in spite of its acknowledged defects, silver-printing in one or other of its manifold forms is destined to hold its own against all its rivals. The special defect of prints in the latter medium is, of course, their lack of permanence which circumstance, if taken into account along with the fact that the silver-printer is for the time being a *persona grata* in the eyes of the public, will serve to emphasize the desirability of something being done to secure a greater measure of permanence in the negative, which, after all, being, so to speak, the printer's basis and starting-point, is as such surely entitled to receive its share of attention.

In view, then, of the importance of this matter, I propose, on the present occasion, in treating of negatives and their preservation, to confine myself to a consideration in detail of the neglected question of permanence. Such a scheme of treatment, however, it will be seen, necessarily involves my bestowing some notice on the practical side of the subject as well as on the theoretical, and here I may say that with reference to the former I shall in the course of my remarks endeavour to bring under the notice of my readers any facts, whether new or not, which seem to have a particular bearing on the obscure technical issues raised

At the outset of the inquiry it is obvious, on the briefest investigation, that the permanence or non-permanence of the negative will depend mainly if not wholly upon two things, viz.: in the first place, the nature, chemical and physical, of the processes employed in its preparation and the manner in which the manipulations necessary thereto are carried out, and in the second place, the character of the treatment accorded to the finished plate during the printing operations, and the special precautions, if any, taken for its preservation at such times when those operations shall happen to be temporarily suspended Any views, therefore, on points of theory, or suggestions of a practical character, which I may have to offer on the subject will accordingly naturally fall to be referred to in one or other of these two categories.

Firstly, then, as to the function or influence of chemical processes and methods of manipulation as affecting the question of the permanence of the photographic image. The several stages in the preparation of a gelatino-bromide negative during each of which this influence may make itself felt, are not more than seven, namely, (1), development; (2), fixing; (3), intensification; (4), reduction; (5), washing—between stages (1) and (2), (2) and (3) or (2) and (4), and after stage (1) and stages (3) or (4); (6), drying; and (7), varnishing.

In regard to the first of these, namely, the action of the developer it is, in view of the present absence of trustworthy chemical data, serving to illustrate this branch of the subject, hardly possible to lay down definite rules for the guidance of the operator. The reagents now in daily use as developers for dry-plate work are, almost without exception, highly complex organic compounds of variable behavior and uncertain constitution. The nature and reactions of these bodies are, consequently, as yet very imperfectly understood, and it is thus impossible to say, in most cases, whether or not, under the conditions prevailing during development, their action is of such a character as is likely to affect the subsequent stability of the image. When, therefore, the permanence of the negative is deemed a matter of primary importance, it is clearly to the photographer's interests that, in choosing a developer, he should select, in preference to a bath of the class indicated above, one of a better known and simpler type, such, for instance, as ferrous oxalate or pyrogallol-ammonia. This course will, so far at least as the process of development is involved, be found entirely satisfactory, as it will enable him at all times to obtain without difficulty negatives of the special character desired.

Whilst on this subject, a word of warning should here be given as to sodium sulphite, nowadays so frequently added as a preservative to the pyrogallol developer. Though well aware that on a point like this relating to what is a matter of general practice it is usually a profitless task to attempt to reform or modify established usage, I shall nevertheless here briefly reiterate the objections which have been urged on theoretical grounds against the employment of this salt for developing purposes. Firstly, then, as is fairly well known, chemical reasons of a most convincing kind forbid the use, except in cases of actual necessity, of sulphur compounds in the processes of photography. The danger is, that when a compound of this class is present as a constituent of the bath, there is always the possibility that the action of other reagents may in the course of the developing or subsequent operations effect its reduction. In such a case the precipitate of free sulphur that is deposited on the surface of the negative, by combining with the silver already present to form sulphide of silver, will bring about a new condition of things, chemically speaking of a kind inimical to the stability of the image. Now, of the various salts of the series of sulphur oxy-acids those of sulphurous acid are among the least stable, and sodium sulphite, in common with the other members of the sulphite family, readily decomposes under the influence of heat or when acted upon by acids. When, therefore, this salt is employed as a constituent of the developing bath, the danger here referred to as likely to result from its partial decomposition will always be found an obstacle to the perfect success of the operations, for unless all traces of the sulphite be removed from the film by thorough washing on the completion of development, a course of treatment too obviously inconvenient to be resorted to in every-day practice, the probabilities are that at some stage of the after manipulations, sulphur will be set free, and that its liberation will effect further chemical changes at the expense of the silver constituting the image. This is the more likely to be the case if the negative be found to require intensification, and if, for that purpose, an acidified intensifying bath be employed. It will be apparent, therefore, in view of the facts above stated, that the practice, now so prevalent, of adding a sulphite to the pyrogallol developing bath is one that

is attended with obvious disadvantages and entails in operation chemical consequences of a very undesirable kind.

The second stage in the preparation of the negative, according to the scheme of enumeration above adopted, is that which represents the all-important process of fixing. The treatment necessary to be bestowed on the negative at this point is a matter that should receive the operator's most careful attention, for it is in the majority of cases precisely at the stage in question that, through neglect of the conditions laid down for his guidance, he fails to secure the realization of his aims. Three rules, all of which are of a supreme degree of importance, and upon the due observance of which the success of that delicate chemical operation is generally admitted to depend, have been enunciated as to the fixing of the image The first relates to the formula of the fixing bath, and enjoins the use, under ordinary circumstances, of a concentrated solution of sodium thiosulphite, alkaline to chemical tests, and containing *not less than one part by weight of the crystallized salt to five parts by weight of water.* To meet the requirements of certain occasions the strength of solution here recommended may be increased with advantage. The above may, however, for most purposes, be regarded as an efficient bath for everyday use. The second rule prescribes the employment in all cases of an ample volume of the thiosulphate solution in fixing the plate, as if this precaution be neglected there is a likelihood that the superfluous silver compounds will not be wholly dissolved out. The third rule has reference merely to the duration of the manipulations, and inculcates the maxim that the period of immersion of the negative in the bath should be sufficiently prolonged to permit the solvent action of the salt to accomplish its work.

The chemistry of the fixing process is of a somewhat complex nature, and cannot be discussed here in any detail. Under normal conditions the action of the thiosulphate solution upon the gelatino-bromide image is to produce a soluble double argentic-sodium thiosulphate, which is readily removable from the film by subsequent washing. When, however, the fixing bath is too weak, or, what amounts to the same thing, the solution is employed too sparingly, a different compound, tetrasodium-argentic thiosulphate, is formed, which, being insoluble, cannot be got rid of by the usual means, and so becomes, by reason of its instability, a source of danger to the permanence of the image.

The third of the seven possble stages in the manipulation, namely, that of intensification, next demands notice. In regard to this matter, dry-plate intensifiers may, I think, conveniently be grouped in two classes, the division being carried out in accordance with what experiment shows is the effect, if any, of their intensifying action on the permanence of the photographic image. Including in the first category such of these only as may with perfect safety be employed to increase the density of the negative, the chief place must be assigned to the ferricyanide-uranium bath. On the other hand, all baths the intensifying properties of which, either in whole or in part, are due to the use of soluble sulphides, must, I fear, be excluded from the category just mentioned, and placed in the other or harmful class of reagents, seeing that any density which the intensifiers of this type are capable of producing is almost certain to be obtained at the risk of endangering the chances of the survival of the negative. The mercurial intensifiers, of which there are several varieties, must also be included in this latter class, as experience tends to show

that a mercurially intensified negative gradually darkens in hue, and ultimately, after the expiry of some years, becomes almost opaque to the more refrangible rays of the spectrum. The other and less frequently employed forms of intensifiers for gelatino-bromide work do not seem to require particular notice.

With reference, next, to the stage in the preparation of the negative represented by the process of reduction, it is only here necessary to warn my readers that, if, as is nowadays usually the case, the reduction of the image is sought to be effected by means of the ferricyanide-thiosulphate or Howard-Farmer bath, it is imperative that the subsequent washing be very thoroughly performed, in order to eliminate all traces of soluble sulphur compounds from the film.

Concerning the process of washing itself, little, I think need be added to our already voluminous literature on that subject. Apart from the special mechanical means,—usually of a simple character—employed to effect the removal of soluble compounds from the film, success at this stage of the proceedings will always largely depend on the thoroughness with which the operations are carried out. Whilst the two forms of treatment usually adopted, namely, washing the plate in running water, and soaking it in repeated changes, have each their advocates, popular opinion appears, on the whole, to favour the employment of a judicious combination of both methods as most likely to effect the object in view.

As regards the next stage in the series of operation, viz.: the drying of the plate, there is, I think, only one point on which a word of advice is necessary. I refer to the injurious action that may be produced on the photographic film whilst in a moist condition by the chemical agency of vapours, gases, or noxious fumes, sulphurous or otherwise. This is a matter as to which the operator must exercise the strictest precautions, for unless these gaseous compounds are effectually excluded from the drying-cupboard or chamber during the treatment of the negative, there is considerable likelihood that the trouble expended on the earlier stages of the manipulations will prove merely to have been labour bestowed in vain.

The last of the seven possible stages in the preparation of the negative is that represented by the process of varnishing. In the case of gelatino-bromide negatives this operation is sometimes omitted as being unnecessary. For work of this class the results of my own and others experience have, I may say, been such as to induce me to abandon the use of varnish whenever practicable, and to convince me, moreover, that its employment is usually attended by consequences of a very undesirable character. I refer to the two features, loss of transparency and increase in density, which, in the majority of those cases where the varnishing process has been resorted to, are found, after the lapse of a few years, to manifest themselves with such frequent and regrettable prominence. The real causes of these phenomena do not seem as yet to have been satisfactorily determined, and the only remedy, therefore, presently available under the circumstances, is to discontinue the use of varnish for dry-plate work.

In conclusion, something remains yet to be said as to the means necessary to be adopted for the protection and preservation of the finished negative. In regard to the storing of the plates, stout cardboard boxes, provided with the usual grooves, are for this purpose to be preferred to receptacles of wood or of metal. These should, however, be of such a construction as to be practically impervious

to damp, and similar influences, and should always be kept in a dry place, out of the reach of dust, moisture, and the action of chemical fumes. Any dust on the film side or back of the plates should be carefully removed by means of a soft brush or silk handkerchief before placing them in the box, these operations being repeated whenever it may be found necessary to withdraw any part of the contents for printing or other purposes. During the printing operations special precautions should be taken to protect the negative, printing frame, and sensitized paper from the action of moisture. If the image be an unusually dense one, or one of a pronounced non-actinic tone, the printing should, if possible, be conducted wholly indoors, or by means of artificial light. In damp weather, particularly when the exposure to light has been somewhat prolonged, the negative, after its removal from the printing frame, should be placed for a few minutes in the drying-cupboard in order to eliminate any traces of atmospheric moisture that may have been absorbed in the course of the manipulations.

SUNSET *By F. S. Andrus*

DECORATIVE STUDY

By James C. Savery

(First Prize March Competition).

AT THE BACK OF THE NORTH WIND *By Elinor Smith*

(Honorable Mention March Competition).

THE MONTHLY COMPETITION

IT is indeed astonishing to note the rapid advance made by American amateurs in the art of true picture making. One has but to examine the files of any of the American photographic journals for a few years back to demonstrate this. Each year has shown a most decided improvement, not only in the handling of the subject, but in selection of printing mediums as well. We Americans are a bit apt at first to rush to extremes—witness the great run of the ultra fuzzy type of but a few years back.

Fortunately, we are pretty well balanced, and soon a sane reaction sets in and finds us well able to distinguish wheat from chaff, to utilize for our own benefit the proper proportions of both. The average American is an enthusiast, striving without end to attain results worthy of such interest, and willing to expend both time and money in accomplishing definite aims. Being optimistic, failure only serves to whet our appetite for success, so we keep at it with a sustained interest which leads to better results.

Each month finds a higher average of pictures submitted in our competitions, and renders more difficult the task of selecting the winners. Not that the pictures submitted are free from faults—masterpieces are rare but the majority are of such equal excellence that often times minor points determine the precedence.

Our first award in this month's competition presents a valuable study for the amateur, not only from the successful attainment of the desired results, but from the decidedly original method employed. The "Decorative Study," by James C. Savery, while an excellent portrait, of sleek Lady Grimalkin, comes

A RAINY DAY *By Joseph R. Iglick*
(Second Prize March Competition).

fully within the lines of decorative effect. It is worthy of note how the principal object of interest is adequately framed by the window sill and frames, how the figure is relieved by the horizontal and vertical lines, and further, how the severity of these lines is broken by the judicious placing of the potted plant which also serves as an excellent balance to the animal figure. Mr. Savery remarks "In order to secure good composition, time exposure and accuracy of focus, the cat was placed on the outside of a window about twelve feet above ground, the focusing and exposure operation taking place from the top of a high step ladder. This rather extreme method, at least prevented the subject from suddenly abandoning the premises." Data, negative made on Eastman Kodoid plate, (non-halation) 1-5 second exposure with stop F. 16 Medium diffused light, developed with Pyro. Print on Willis & Clements Rough Platinum. Taken with a Century Long Focus Grand Camera (size 5x7).

"A Rainy Day," by Joseph R. Iglick received the second award. This pic-

I KNOW A MAIDEN FAIR TO SEE *By G. A Woodworth.*
(Honorable Mention March Competition,)

ture is a successful home portrait against the light, and shows the possibilities of this method of working when once the matter of correct exposure has been determined. A little more foreground would have provided better balance and served to increase the value of the composition. Data furnished read as follows: Bausch & Lomb Zeiss Tessar lens, Standard plate, developed with Pyro, three seconds exposure. Printed on platinum.

"At the Back of the North Wind," by Elinor Smith was awarded First Honorable Mention. This picture, purely decorative in treatment, while not without faults, has much to commend it. It is an ambitious attempt, and at least displays originality. We should be interested in seeing further endeavors along these lines. The lens is brutally frank in portraying just the means we employ to secure our effects and it requires rare skill indeed to conceal our stage sittings and properties when attempting work of this sort. Data, made by ordinary window light, Dallmeyer lens, stop F. 8, three seconds exposure. Printed on Normal Cyko.

The Second Honorable Mention, "I Know a Maiden Fair to See," by G. A. Woodworth, is a dainty example of the more conventional form of child portraiture. Aside from the charm of the piquant little face, there is delicacy of treatment showing good knowledge of exposure and development. Note the ample detail in the lace, and the silky texture of the bow underneath the face. Spacing and pose are also excellent. Data, made with Usner lens, full aperture, snap shot. Seed 26 X plate. Pyro Developer. Printed on platinum.

The Third Honorable Mention goes to a bit of nature in cold and severe tones, yet most pleasing in effect. "Path to the Lake," by R. E. Weeks, presents a number of difficulties only to be overcome by a thorough understanding of the requirements of the subject and the limitations of photographic apparatus and material. To properly render the extremely bright foreground, the waving reflected lights of the water, and yet preserve the proper values for the distance required some thought, and the data will present an interesting lesson in exposing for subjects of this nature. Made with a Bausch & Lomb Plastigmat lens, Burke & James Ray Screen, ½ second exposure on Cramer Medium Iso plate. Light cloudy bright, 10 A. M., in January. Enlarged on Defender Monox Bromide No. 5 Hard Amidol developer.

We extend our thanks to the competitors for furnishing full data with their entries. Without these particulars much of the educational value of the reproduced pictures is lost, and the primary object of the competitions defeated.

PATH TO THE LAKE *By R. E. Weeks*

(Honorable Mention March Competition.)

MAKING PHOTOGRAPHS UPON WATCH FACES AND DIALS.

BY A. J. JARMAN.

HOW to produce photographs upon the inside of watch cases, and the dials or faces of watches, does not appear to be generally known. About three years ago, the writer gave a full description of the process employed, in such a way that the professional photographer could take such work in hand. These articles were reproduced by many of the photographic journals of European countries, the methods employed being regarded, (previous to their publication) as very secret in character. The object of the present article is to give the necessary instruction that will enable the amateur as well as the professional photographer to produce these beautiful and permanentphotographs upon the interior of the watch case, at very little expense, and without the special appliances that are required to carry this class of work out upon a commercial scale. To prevent disappointment, do not attempt to transfer a photograph, prepared for this class of work, upon a nickel plated watch case Any watch case that is plated with silver or gold will do, if considerable care is exercised so as not to penetrate the plated coating and expose the inferior metal base; a gold or silver watch case will present no difficulty. The negatives employed for this class of work are known as *reversed* negatives, and are produced by means of a prism attached to the front of the lens, the camera in this instance being placed at right angles to the picture to be copied. In the present case, the prism can be dispensed with, and a portrait negative made upon a sensitive film. This will enable the printing to be done from the reversed side of the film, which will be found to answer the purpose perfectly. The slight thickness of the film will effect the print made from it. The quality of the negative must be a little contrasty, because this kind of negative will give just the required effect upon the gold or silver surface. A soft or thin negative will not answer. If used, it will be sure to cause disappointment. If, however, the negative is quite clear in the shadows, and it is the only one that can be obtained, it should be intensified, by any one of the well known methods. It will then be fit for use. The lid of the watch must be removed. This should be done by an experienced watch maker who will make a small charge for the removal, and replacing when the picture is finished.

The following solution must be made up and filtered. It will keep in good working condition for some time, and may be used over and over again for about a half dozen times.

Bichromate of Potash (c.p.) ..	2 oz.
Carbonate of Ammonia	40 Grains
Water	50 oz.

when the above is completely dissolved, add the following:

Salicylic Acid (dissolved in 4 oz. of boiling water).....	40 grs.
Glycerine	30 drops

Add this to the bichromate solution, shake it well, filter it either through absorbent cotton, or ordinary filtering paper. As soon as it is quite cold, it will be ready for use. Now procure a dozen sheets of plain carbon tissue. The best color to use for this kind of work is known as Lambertype tissue, which is of a purple tint. Brown black, maroon black, and engraving black tissues are also used as well as red chalk, but the Lambertype

purple stands as one of the very best colors suited for a gold or silver surface. About a half yard of thin India rubber water proof cloth will be required, and a six inch India rubber squeegee. Several enameled iron trays will also be needed, and one common earthenware pie dish to hold a solution of potash lye.

PREPARATIONS OF THE NEGATIVES FOR PRINTING.

Take a piece of clean glass four by five inches, and place upon it a piece of black or orange colored paper with the required size hole, cut in it as follows: If the inside of the watch case is 1¼ inches in diameter, take a pair of compasses with a lead pencil in one leg, draw a circle 1¼ inches in diameter in the middle of a piece of black paper, then draw another circle upon another piece of paper 1⅛ inches in diameter. Cut these circles out, so as to leave a clean edge, then attach the sheet of paper with the *1¼ hole* in it to the *front* of the four by five plate, by means of a touch of paste or gum here and there upon the plate. Upon the *back* of the four by five plate, adjust the film negative, so that the figure comes in the centre, and fix this in position by a few small strips of gum paper, (the film must be placed upon the glass plate so as to print from the back) thus producing a reversed negative. Place over the film the remaining piece of paper with the 1⅛ hole in it, adjust it so that it is central, by viewing it from the front, then hold it in position by a touch or two of paste. Upon the front of the four by five plate, place another four by five plate, hold both together with strips of gum paper. Just as soon as everything is dry stump in upon the front of the plate with a brush and some opaque color, (Gihons opaque is well suited) so as to form a vignette around the portrait. This vignetting gives the necessary safe edging which is required in all carbon work. This vignetting by stumping upon the front of the glass is best done in a retouching desk, or the plate may be held against the window pane during the operation. The negative being now ready, place it in an ordinary four by five printing frame, stand this aside so as to be ready for the printing.

SENSITIZING THE TISSUE.

Under an orange colored light, pour the bichromate solution into a clean 10x12 tray, take a piece of carbon tissue previously cut to 8x10, place this into the bichromate solution face up. If it curls at all, hold the ends down for a few seconds. If any air bubbles occur just brush them off with the tip of the finger. After soaking for one minute and a half, turn the tissue over, and allow it to soak face down for another minute and a half, then remove it. Place it face down upon a sheet of clean glass (about 11x14 will do), place one end of the India rubber cloth over the tissue, and apply the squeegee by holding the cloth with one hand, then apply the squeegee upon the cloth with a pushing motion, then return the stroke by drawing the squeegee towards one, lift the cloth, and wipe the back of the tissue with a piece of clean rag, lift the two top ends of the tissue, insert two wood clips, then lift the tissue from the glass plate and suspend it in a room away from dust and all active light to dry. Prepare as many pieces of tissue as may be required, and when dry, place them under pressure in a printing frame, protected from the action of light by black paper. The tissue thus prepared will keep well for about one week to nine days. Now cut out a cardboard gauge, by describing a circle with the compass (thin strong cardboard is best suited) the size of the inner circle 1⅛, place this gauge upon a piece of the sensitized tissue

under an orange light. Put this disc of tissue upon the negative so that it fits into the cavity of the paper covering, and be sure to mark the tissue with the letter T upon the back, so as to indicate the top of the figure. If this is not attended to at the time of adjusting, the tissue for printing, it will be impossible to ascertain the right position, when attaching the tissue to the watch case for development, all being ready now for printing. Place in another 4x5 printing frame a negative of similar quality, and upon this negative place a strip of printing out paper, either Solio or Aristo-platino. Now place both the frames out into the light, not direct sunlight, but in the shade. In the course of a few minutes, remove the frames to a shaded part of the room, examine the printing out paper. If the picture is about one-third done, the carbon print will be complete; if not, continue the exposure until the printing out paper shows the gauge one-third printed, and the carbon print will then be done. It must be understood that the carbon print cannot be examined during exposure, the paper print being the guide. Have on hand already made up a syrup made by dissolving, half a pound of granulated sugar in half a pint of boiling hot water, allow the syrup to stand until quite cold, then pour off the clear portion into a clean bottle ready for use.

The lid of the watch case must be thoroughly cleaned by dipping it into a caustic solution made by placing a few ounces of potash lye (such as is purchased in tins at the grocers) in a quart of *warm* water, do not dip the fingers into this liquid, hold the lid by a wood clip, or drop the lid into the solution, and remove it with a wood clip. The bright interior surface must be carefully rubbed with a piece of absorbent cotton, pressed into a piece of India rubber tube. Rub the lid with this until no greasy effect is observed, when water from the faucet is allowed to run upon it. Rinse the cap well so that no trace of lye remains. Then dip it into the sugar syrup, which may be contained in an ordinary saucer, allow it to remain here until the disc of exposed tissue is ready. Take the piece of exposed tissue dip it into a tray of clean water, it will curl up at first, then gradually uncurl and as soon as it lays flat, remove the watch lid from the syrup, drain it, then place the wet tissue in its right position, taking care that the part marked T is at the top, otherwise the picture may be upside down, or sideways. Having the tissue in position, drain off the water and syrup, place upon the tissue a disc of blotting paper, this will remove the excess of water, if one piece does not, use a second piece. Now press the tissue down in every part of the circle by the tip of the thumb or forefinger, moving the lid round at each rub or squeegee. In the course of a minute or less the contact may be regarded as complete The lid must now be allowed to stand unmolested for about ten minutes. After this time take one of the enamelled iron trays, pour into it about a quart of warm water. Place the watch lid into this, allow it to soak for a short time. In the course of about one minute, or so, the coloring matter of the tissue will be seen to ooze from the edges, now is the time to hold the lid firmly down with the left hand, then remove the piece of loose backing by a pair of tweezers. Take care not to injure the carbon film upon the lid in doing this; this lid may now be moved backwards and forwards in the warm water, when it will be seen that a brilliant image is rapidly developing In the course of another minute or two the development will be complete. The lid must now be dipped into a tray of clean cold water, then into a bath made of common alum, one ounce to fifteen of water, and filtered. The lid must not remain in

this solution too long, about two minutes will be sufficient, then it must be placed into cold water, and moved occasionally, and lastly, very carefully washed under the faucet, with a gentle stream of water. The lid must then be placed aside in a cupboard free from dust upon thick strips of blotting paper to drain and dry.

To aid the removal of water which always collects at the bottom of the lid, a few strips of blotting paper must be cut, and the end just torn off so as to take up the water rapidly, when touched with a paper strip. When the print upon the lid is quite dry, it must receive a coating of clear water proof varnish. This can be purchased under various names, such as Crystalline, Alba Varnish, Celluloid Varnish, and Amyl Acetate Collodion. The lid is taken and a pool of any of the above is poured upon the print, the excess is drained off, and the lid stood aside as before upon blotting paper, for the varnish to dry spontaneously. The same assistance will be required with the blotting paper, to get rid of the little pool of varnish that will form at the bottom. When dry, the lid may be refitted to the watch which completes the work, the picture being perfect upon a bright gold or silver case.

To produce a picture which is to be attached to the dial of a watch, the dial must be removed, and if the part upon which it is intended to place the print is marred by any of the letters or figures coming in the way, the lower ends of these figures can be easily removed by pointing a small strip of wood dipping it into Hydrofluoric acid and a slight rubbing over the spot will remove the figure, or as much of it as required. The dial must then be washed under the faucet and dried. The print for a watch dial is made much smaller than for the cap or lid, and usually oval in shape. The preparation of the miniature negative is carried out in just the same way. The vignetting cuts off any of the sharp edges of the paper mat and softens the edges of the print. When the carbon tissue has been exposed, all that is necessary is to press it down upon that part of the dial intended, the dial being wetted with a syrup the same as in the preparation of the lids, the development not being proceeded with until ten or fifteen minutes after the tissue has been placed upon the dial. As soon as the print has been developed and treated to the alum bath, and washed, it must be dried and varnished in the same way as the watch lid. The varnish may be poured all over the dial, covering not only the miniature carbon print, but the figures and letters as well, and then drained and dried. The complete coating of the dial, will not affect it in the least, this kind of varnish or lacquer being perfectly transparent, and possesses no appreciable thickness. Sometimes there is a difficulty experienced in getting this kind of varnish or lacquer. For the benefit of those who wish to make their own varnish, the following formula will supply the required information. As no heat is employed in the operation, there will be no fear of danger in the preparation.

AMYL ACETATE VARNISH.

Pyroxiline (gun cotton) . . . 160 Grains
Amyl Acetate (concentrated) 4 oz

Shake this mixture well then filter through a lightly made plug of cheese cloth that has been washed out and dried. The filtering should be done twice, with clean cheese cloth each time, the mixture is then ready for use according to the directions then given. The drying of any object that has been varnished with this preparation may be hastened by a gentle warming. Care must be taken not to approach a flame too closely; should the varnish ignite, the surface will present a reticulated appearance. This prepara-

tion can be thinned down at any time should it be required, by the addition of Amyl Acetate. The varnish must not be thinned down too much, however, because the coated surface will then present many of the prismatic colors, when double varnishing will have to be resorted to If it is desired to carry out the production of watch case portraits upon an extended scale, and much carbon tissue has to be prepared, it will then be necessary to use India rubber gloves upon the hands to prevent the corrosive action of the bichromate solution, which if continued, will cause the fingers to become very sore at the quick and under the tips of the nails. The sensitizing of a few pieces of carbon tissue will not cause any inconvenience. In place of India rubber gloves, the usual finger tips can be used with advantage, providing they are washed each time they are used. The hands should be washed well in warm water after sensitizing, without soap, then rinsed in cold water and wiped dry. With these precautions attended to the hands will not become injured.

A COUNTRY BYWAY *By H. Cooper*

Editorial Notes

What is the use of wasting film, plates and paper in the attempt to make pictures unless you really know what a picture is? Unless you are a heaven born genius, and we have never seen one, your attempts will about as much resemble a picture, as the efforts of an amateur carpenter working without plans, would resembles the structure erected by a master architect. You may say "I don't care to make 'pictures'—all I ask of photography is that it allows me to make a few records of my out door pleasures and the things that interest me without reference to the art side of the question." This is all very well, but how long will it be before you are wondering why your photographs do not satisfy you any longer, and that when you show your collection, they are hurriedly passed over by long suffering friends without comment. You notice that the photographs of some of your friends fascinate and interest you, that you will turn back and examine them again and again, they may be of the most commonplace subjects, but possess a subtle quality that seems deplorably absent in your own efforts, and you wonder and wonder why it is so. That is just the difference between a mere photograph and a picture. A man utterly devoid of any knowledge of art may some time stumble upon an artistic bit, and unthinkingly record it upon his plate, —the resulting print pleases him, and his friends—just why all his other efforts, using the same plate and paper are ineffective he does not know. At this stage, usually one of two things happens, he loses interest in photography and shelves his camera, or he begins to inquire more closely into the methods of the man making photographs that have interest and fascination for him, and learns that every one of this man's pictures are *planned,* that each mass of form or shadow or bit of high light has definite reference to the picture as a whole; in other words, it has been built according to a definite rule, and that good pictures cannot be made without definite rules and plans for their structure. The rules for picture building are simple but nevertheless inexorable, and these rules must be learned and applied before the photographer can hope to make *pictures.* It will often happen that the view shown on your ground glass or in your finder will not conform to these rules, but perhaps a slight change of the position of your camera to the right or left, or up or down, will bring things right, if not you have not a picture—and do not waste a good plate upon it. Resolve to reduce the waste of good plates, study the rules governing picture structure. There are many good books to be had at a slight cost--you will not produce so many photographs, but you will make *pictures.* Then the effort will be worth while and you will really begin to enjoy the true delight of photography and be able to confer pleasure upon the many who could look at your pictures—but who have not had the opportunity to view the same in nature.

Have you not heard some amateur exclaim "How I wish I lived out west (down South, on the coast, or any place except where he is) there is nothing here to make pictures of." The trouble with many of us is, that we lack the faculty

of selection, a faculty which may be cultivated. There are pictures all around us, yet we fail to see them unless some special beauty in forms or arrangement compels our notice. We venture to say that Eickemeyer or Steiglitz could stroll into the most commonplace back yard, and find material for a half dozen good pictures. The beginner in picture making seeks to include too much within the small confines of his plate, entirely forgetting that one of the first principles of good art is simplicity. As an experiment, mentally select some area you are sure cannot by any means conceal a picture, then on the first opportunity visit it with a camera, and see if you cannot find material for more than one. Study the little things, and simple arrangements —learn to make your pictures out of the least material possible, make the story simple—it takes a master to deal with complexities.

JONQUILS *By Albert S. Hull*

PHOTOGRAPHY AND HEALTH.

BY WILLARD PYKE.

WE have all been more or less interested in the concerted effort put forth by the photographic trade to foster in the mind of the amateur an enthusiasm for winter photography. Camera people, lens houses and editors have left no stone unturned in encouraging him to keep his camera in commission the year round. Lenses are offered to him nowadays which will do wonders on dull days; the camera-man proffers him the focal-plane shutter with its remarkable possibilities; the plate-man produces for his use emulsions with speed, orthochromatic and non-halation qualities all contained; while the good editor fills his mind with facts, figures and formulae which guarantee success under the most discouraging circumstances.

And yet, while these friends of the amateur have spent much time and a great deal of money in their worthy effort and have covered almost every possible point, they have overlooked one important consideration which must or should appeal to all hands—health.

You will naturally ask, how will photography benefit one's health? The answer comes easily, fresh air, exercise and a mind thoroughly in tune with Nature, searching out her beauties to enjoy and perpetuate. Show me a man who spends his holidays in the open air, with a camera, a gun or a bunch of golf sticks; and I will show you a man with a good appetite, a clear mind and a clean skin.

Ask any physician you will, why he is busier in winter than in summer, and, if he stops to think and to analyze his mind. he will undoubtedly tell you that in winter the majority of people eat too much and exercise too little. And as this is the foundation, in reality, of nine-tenths of human ills the cure is evident; eat less or exercise more. From the day when civilization redeemed our ancient and honorable ancestors from an out-of-door existence and put them into trousers, skirts and houses, the tendency has been steadily towards luxury and laziness.

But what does all this mean to the amateur? It means that he comes home in the fall from his summer's outing, puts his camera away on the shelf and gets down to business. Winter finds him eating early, often and late. It finds him stouter but pale, and his flesh is flabby. His liver congests, he is bilious often and his digestion soon goes back on him. He catches cold easily. Naturally, he gets the "blues" and thinks he needs a tonic.

If his doctor is wise, he gets a blue pill, perhaps, and some sound advice about getting out into the open air and working off some of his flesh and pallor. And so we see and understand the man who religiously walks to his business every morning for his liver's sake and who shows in his expression that he is taking his medicine with the best grace possible.

It is not the purpose of this article to recommend winter photography for everyone. It is for the man who won't take exercise because "he hasn't anything to do to occupy his mind while he is walking." It is for the amateur photographer who thinks that his camera is called in on the first of October with his straw hat. It is for the man who complains that he always hates Sunday because it gives him dyspepsia on Monday, and who complains of the long winter evenings when there is nothing to do. It is for such as these that winter photo-

graphy is advised because it brings the mind and body into harmony in a clean, healthy occupation; an occupation which is as refined as it is delightful.

One who has never taken a winter jaunt with his camera has really missed something worth while. Of course it is pleasanter for the city man to take his outings in the country or suburbs where Nature in her winter garb appeals more strongly to his senses; but this is not necessary provided our amateur friend has gotten over the desire to include within the margins of his picture everything in sight. It is the little bits of landscape which make a picture, and the old saying to get close to Nature might be made stronger and say get *closer* to Nature. Many of the best pictures shown nowadays at the exhibitions are street scenes made at close range. The city man has not far to go for his subjects for they are almost at his door every hour of the day. I once laughed at a friend for snapping an old dilapidated team of horses standing in the market rubbing noses; but the result was so excellent that he is still collecting royalties and, I might add, laughing at me.

The rivers about a great city are always full of interesting bits for the photographer. On any of the long ferries one may secure a dozen clever negatives of passing ships or attractive bits of shipping along the docks. While the parks are often scorned by the older amateurs, a short detour from the beaten pathway into the wooded spots along the hillsides is often rewarded with very gratifying little pictures of woodland composition.

And now, lastly, just a word about your equipment. Take along with you as little as possble. Keep your camera small. In speaking on this very subject, Mr. Frederick Monsen of California, whose photographs of the Indians in the great southwest have attracted so much attention, recently said in a lecture that he had started out in his photographic life with a twenty by twenty-four camera, and had gradually decreased the size of his box until now he never uses anything larger than three and a quarter by four and a quarter in all his work. He also spoke very strongly in favor of films, saying that he used them in preference to plates for many reasons aside from the difference in weight.

Save money on the size of your camera and films or plates and put it in a fine lens of the double anastigmat type. With a fine lens in your camera your pictures will have a brilliancy which will more than delight you, and the sense of satisfaction afterward enjoyed soon crowds out of your mind the recollection of the price.

For my own use I carry a No. 3 Petite Century fitted with a double lens of six inch focus and working at a speed of F. 6.8. The shutter which I prefer to any is the sector. This little camera is the acme of the camera-makers' art and accommodates either plates or films. In the little flap-door which covers the ground-glass on the back of the camera, I have had bored a hole large enough to fit snugly a short focussing-glass. The eye is placed directly up to the eye-piece in focussing for sharp detail, doing away entirely with the focussing cloth.

MONTHLY FOREIGN DIGEST.

TRANSLATED BY HENRY F. RAESS.

LUMIERE'S CHROME FIXING BATH.

Chrome alum has certain a*dvantages* over formaline and potash alum for hardening the gelatine film. Formaline is very volatile and if it is used in a dark room with poor ventilation, it becomes very objectionable as the vapor attacks the mucus membranes. Nor is the hardening permanent, for if the wash water is very hot the formaline is all driven off (vide Photo Times Jan. '07, Page 39) Potash alum is strongly acid in character and slowly decomposes the fixing solution, besides it possesses only one-third the tanning properities of chrome alum, and plate will not permit so high a temperature as the latter in the wash water In the experiments made by the Lumiere Brothers they found that commercial sodium bisulphite solution (vide Photo Times, Nov. '06, page 518) prevented the slow decomposition of the fixing bath by the various alums used for hardening. Also that the amount of bisulphite influenced the degree of hardening.

English.	Metric.
33 ounces by weight, Sodium Thiosulphate (15% solution) . .	1000.0
75 grains Chrome Alum	5.0
½ oz. Commercial sodium (Bisulphite solution)	15c.c.

Before placing the plate in the above fixing bath, it should be well rinsed. It would be advisable to watch the condition of the fixing bath as the amount of acidity is small, and it would not take the alkali of many plates to precipitate chromium hydroxide, the bath then losing its desired properties. Probably it would be well to add from time to time small quantities of acetic acid—*Photographische Industrie*, No. 31 and No. 42, 1906.

WARMING PLATES BEFORE EXPOSING OR DEVELOPING.

Monkhoven was the first to notice that if a dry collodion plate was warmed and then developed with a cold developer, that the image appeared quicker and with greater intensity than if the operation was reversed. The same thing applies to gelatine dry plates. The author made some experiments to substantiate the above. He cut an exposed plate in two, one of which was warmed and then developed both in the same dish with a cold developer. The warmed plate immediately gave a clear picture, richer in detail than the other, even when the latter was permitted to remain in the developer until it fogged. The action of the heat is physical, the pores of the film enlarge allowing the developer to penetrate more readily. A plate which was warmed at the time of exposure also gave better results on making comparative tests. The developer in all cases must be colder than the plate. The original article is rather long, but interesting, the gist, however, is contained in the above.—By F. B., *Photographische Chronick*, No. 84, October, '06.

FOCUSING SCREEN FOR MONOCHROME IMAGES.

The beauty of a landscape often appeals to us and we forthwith photograph it. Yet the print may be very disappointing, it does not give the same impression as the original landscape. The reason is that we usually reproduce a print in one color, and the effect of color in nature is lost. If we could see the landscape in monochrome on the ground glass, we would get a better idea what the resulting picture will look like. A simple method is to have the ground glass in one color, and blue seems best adapted for this pur-

pose. According to *Apollo,* (Vol. 12, No. 268, August, '06,) a blue ground glass is made as follows: A dry plate is exposed five or ten seconds, to a candle light at a distance of three to five feet, develop until a gray fog forms, fix and wash as usual, and whiten by means of mercuric chloride solution. After washing the plate it is placed in a solution of wash blue until the required color is obtained, the plate again washed slightly and then dried. (As most solid wash-blues consist of ultramarine, an insoluble substance and not transparent, the experimentor will do well by first testing his blue by shaking a quantity with water in a tall glass and allowing it to stand a day or two to see if any precipitation of the substance takes place. The liquid blues may be better suited than the solid for coloring the screen.—*Translator.*)

COMBINATION ROCKET AND CAMERA.

An unusual method of obtaining a birdseye view photograph has been patented in Germany by Alfred Maul of Dresden. It consists of a rocket-like piece of apparatus. The head or point contains the lens, shutter and plate, back of this is an arrangement for releasing the shutter. This part also contains a parachute which opens when the projectile begins to descend, and prevents damage or destruction of the apparatus. To prevent a too rapid turning during flight, suitable longitudinal ribs are placed on the tail piece. The angle at which the exposure is to be made can also be regulated. The moment of exposure is controlled by a time fuse. The weight of the apparatus used was 25 kilos (52 lbs.) diameter 350 m.m. (14 inches) length 6 metres (19½ feet). The rocket will ascend to a height of from 500-700 metres (1640-2296 feet, almost ½ mile.) That the method is considered seriously is proven by the fact that the military authorities have appropriated 180,000 Marks ($45,000) for further tests and experiments. —*Photographische Industrie* No. 43-44, October, 1906.

THE VILLAGE BLACKSMITH *By Willis E. Elliott*

GASLIGHT PAPERS.

THE following interesting notes were given by F. E. E. Dimmick when demonstrating last week before the London County Council Staff Camera Club:—

Gaslight papers have been so improved that it is possible nowadays to obtain a soft print from any reasonable negative provided that a suitable grade of paper be chosen and appropriate methods of development adopted. As a general rule, the slower the emulsion of the paper, the greater the contrast obtainable, and for a soft print the exposure must be cut rather short and developer used at full strength—just the opposite to the course one would pursue with bromide paper.

In development with metol-hydroquinone, the use of pure sodium-sulphite is imperative, an unusually large amount of sodium-carbonate is necessary to prevent stains and chemical fog, and to avoid greenish blacks. The amount of bromide of potassium (varying according to the age and dampness of the paper) must be reduced to a minimum.

If yellow stains are to be avoided, the fixing bath must be acid, the object of the acid being to eliminate the developer from the print as quickly as possible.

The production of warm-toned prints on gaslight paper by direct development has now been rendered a comparatively simple operation, in which the modified colour depends primarily upon two factors, viz., (1) the composition and strength of developer and (2) the degree of exposure.

It would appear that methods of this kind have not hitherto been regarded with much favour either by photographic workers or by makers of materials. There seems to be only two published formulæ, and neither have been heard of lately.

By using the following formulæ on carbon Velox or on Rotox the most diversely-coloured results have been obtained.

1. Rodinal ammonium carbonate.

Rodinal	1 drs.
Water	3 to 10 fluid ozs.
*A. C. solution	1 to 4 drs.

This formula yields soft prints on vigorous paper.

2. Pyro acetine sulphite.

Pyrogallic acid	43 grs.
Acetine sulphite	¼ oz.
Sodium carbonate	1 oz.
Potassium bromide 10 per cent.	10.20 grs
Water	10 ozs.

This gives greater contrasts than rodinal and A. C.

Using these formulæ, six to twelve times the normal exposure necessary for a black print should be given.

With rodinal 1 drachm, water 5 ozs., and of the A. C. solution 1½ drachms, exposure six times normal, an excellent warm sepia resembling the carbon tint is obtained, while with a nine-times normal exposure and rodinal ½ drachm, water 5 ozs., and A. C. solution ½ drachm, a most pleasing red is obtained.

The action is slow and under full control, and as the image gains intensity it gradually changes colour; the print must be removed from the developer slightly before it appears to have obtained the full depth of colour desired. It is important not to over-develop. The prints change colour and lose intensity in the hypo, but both return when the prints are finally dry.

The pyro-acetone formula is excellent for lantern slides of the gaslight class, avoiding the clogged shadows so noticeable in slides as usually developed for

* A. C. solution.—Ammonium carbonate (clear crystals only) ½oz, ammonium bromide ½ oz., water 5 ozs.

colour when viewed in the hand. With gaslight papers it produces greater contrasts, and a smaller range of pleasant colours than rodinal.

Prints of bad colour may be toned by any of the ordinary methods, and those which have been over-developed may be reduced in the usual manner without any loss of colour, but the contrasts will be modified according to the developer used.

—*The Photographic News.*

POST CARD BORDERS AT ONE PRINTING.

BY J. PEAT MILLAR.

THE picture post card is without doubt the most popular method now used by amateur photographers for the printing of their favorite negatives, and in most professional studios the post card has found a place, for nowadays everybody wants post cards. There is no doubt but that a real photographic card well printed and finished is a thing of beauty (as post cards go), and is well worth the care exercised in the printing.

There are various ways of adding to the appearance by surrounding the picture with a border. Masks can be bought for double printing, but they are often difficult to centre properly, and seldom are they in keeping with the principal subject of the card. The simplest manner of adding a border is by leaving a margin of white, then by having a number of pieces of thin card about a quarter of an inch smaller than each other, both ways. Various tints can be printed one after another, forming a sort of frame round the picture, which generally adds to the appearance. Another way, for those who print from small negatives, is to first print the view, or portrait, using a mask of a suitable shape, then cut a piece of thin black paper, about a nineteenth of an inch smaller than the picture; place neatly over the picture; then lay the whole thing on to any other suitable negative you care to use as a border. Flowers do well with landscapes; and landscapes make suitable borders for portraits, sometimes. To finish, a tint can be printed all round the edge of the card, which generally helps to complete its appearance. How to do this I have described in detail various times, but it is only suited to printing-out methods, and I have had some people complain about the time taken over the extra printing. I have often thought that some method of printing the border at the same time as the picture would be a great saving in time. I have discovered how it can be done, and done very simply, by using films instead of plates. This may be considered a drawback by some, but considering the thousands of film cameras in use every day, and the great variety of good flat films on the market, it need be considered no drawback. If we place a film in the printing frame with a piece of clear glass as usual, then put a post card on top and print, we will get our picture with a black border larger or smaller according to the size of the film; but if we take a piece of white paper and cut an opening about the size of the film (either larger or smaller), then put that into the frame and centre the film over the opening, then put in a card and print as usual, we get our picture with a light or dark grey border according to the thickness of the paper and the printing density of our negative. If the opening in the white paper is smaller than the negative, we will get a narrow white border next the

picture, and if the opening is larger than the negative we get a narrow black border next the picture, and the broad grey border outside of that.

The effect got in this manner resembles a print mounted on a natural tint mount. If we want a darker tint we use a thinner paper, or two sheets of the same paper will give a lighter tint. Again, if we take a soft pencil and draw lines around the opening, or put any lettering or design we like, it will all be reproduced when printing, giving the picture first a white or black border, then a light or dark tint with white lines or lettering showing on the grey tint. Instead of paper, linen, cotton, canvas or silk can be used, and we will get the various textures faithfully reproduced. Wall paper of suitable designs can also be used in this manner, and a dark or black outside tint can be got by having the paper a quarter of an inch smaller than the post card, and all at one printing, either in P.O.P., gaslight, or bromide paper. Now, if we have a negative of flowers we would like to use as a border, if it is on a film, we have only to cut out an opening to suit our view or portrait negative, and proceed as before. If our floral negative is on glass, we only need to carefully scrape away the opening we require, and go on as before. Of course we don't want to cut up and waste our best flower negatives, but who has not got some that are not of much use for anything else? At the same time a copied negative will do well enough for the border; and if you can manage it, always use a border negative that is a little denser than the principal negative, as the floral decorations can be a little lighter than the principal picture. If you are in the habit of working one size, you can make a few border negatives to take any or all of your views and portrait negatives, and ring the changes on them to any extent. There is no end to the variety of effects that can be got with a little thought. On the other hand, if you want to print hundreds of post cards you have only to fasten the combination to a glass plate with a touch of gum or mountant, and you can go on printing as many as you wish, just as if you were printing from one negative.

To make the thing a complete success everything must be done neatly. The view or portrait negative must be trimmed to the exact size required and the various openings cut square or round as the case may be, with good clean edges. It is best to make your trials by the same process as you are going to print with, as a combination that prints right in P.O.P. may not do so well with gaslight papers, and *vice versa*.

While this method is best adapted for printing from films, it can, with a little extra trouble, be used to print from negatives on glass; but the easiest way, if a large number of prints are needed, is to make film negatives from the glass ones, by way of a lantern transparency.

—*The Photogram.*

THE DWELLINGS OF THE HUMBLE *By Rev. H. W. Dick*

(Royal Photographic Society Exhibition 1906)

PRINTING IN CLOUDS ON BROMIDE PAPER

BY WILLIAM GILL.

ALMOST every worker has his own particular method of printing in clouds on bromide paper. The following is that which I have adopted as being the easiest or at least that which I have absolute conscience of cloud and landscape can be most easily obtained, and in which there is most perfect control over the development of the cloud. It is applicable both for enlarging and contact printing, but is much easier for the latter.

By far the most satisfactory method of putting clouds in enlargements is to make transparencies from the landscape and cloud negative, the latter on a celluloid film and bind into contact. It is thus possible to remove any cloud form from projecting parts of the landscape, either by hypo and ferrocyanide or actually cutting away of the celluloid. There is no chance of the junction-line showing, and the use of celluloid films enables one to adjust the cloud negative to the lighting of the landscape merely by inversion.

The necessary materials for putting clouds into contact bromide prints beyond the ordinary things that every worker has in his dark room are a sheet of celluloid, such as is used for rollable films, about half an inch larger all round than the negative, and some absorbent cotton wool.

The landscape is masked, exposed and developed in the usual manner, and then well washed under and immersed in a weak solution of citric acid, about quarter of an ounce to the pint, which prevents any further developing action, though, of course, precisely the same result may be obtained by washing long enough. After the acid bath the print should be rinsed, laid face up on a sheet of glass (an old negative will do), the celluloid gently squeezed into contact with it, and the surface of the celluloid dried.

The cloud negative can now be adjusted in position over the landscape and shifted about without any difficulty so as to obtain the best arrangement, and the whole is ready for the second exposure, which, as is well known, should not be so long as for the landscape, as otherwise the clouds will be too heavy. Precisely the same developer may be used for the clouds as the landscape; in fact, it is preferable to use the same, for if the developer be diluted or mixed with glycerine, as has sometimes been recommended, there may be a slight difference in the colour of the image, which gives a somewhat curious effect.

To develop, the celluloid is stripped off the print, left on the glass, and supported at a convenient angle with the sky portion downwards, and the developer applied with a tuft of cotton wool well saturated. This should be applied as rapidly as possible over the sky, and then the progress of development carefully watched and more developer applied to any parts which lag or should be thought to be darker. The merging of the clouds into the horizon or any portion of the landscape which projects into the sky can be very easily effected by applying more or less developer.

The advantages of this method of working are that one is absolutely sure of getting the clouds in the right position, and with correct exposure and development they are sure to be correct in tonality. Development of the clouds can be immediately arrested by washing under the tap, and provided care be taken to al-

ways keep the landscape portion uppermost, there is no chance of its further development.

I have not found that there is any degradation of the high lights of the print by this method, but should this be feared it is extremely easy to make a mask of the landscape by printing on P.OP. till the outlines are visible, then cutting out the landscape and pasting it on the glass side of the cloud negative. This prevents any chance of the second exposure affecting the already developed landscape, and the mask being on the glass prevents too sharp a line of demarcation. The use of the celluloid does not cause fuzziness or want of sharpness in the clouds, whilst if this is required—and softness of definition in this part is by no means a disadvantage—thicker celluloid may be used, when the desired result will be obtained.

This method of working may seem somewhat troublesome and tedious, but with a little practice it soon becomes very easy, and the results are so certain as to warrant its trial by everyone.—*The Photographic News.*

SUNLIGHT *By C. D. Kay*

Notes, News and Extracts

Follow this Simple Rule and your mounted prints will never curl.

After mounting in the usual way allow the print to dry a little and while still moist, bend it back a little, not too much, just a gentle curve, and support it in that position till dry, by putting a heavy book each side. This process stretches the gelatine film. Lay dry prints in a pile under a weight and they will be perfectly flat.

* * * *

Prizes for Photographs that Please Advertisers.—The advertising department of *Leslie's Weekly* has frequent calls from advertisers for attractive photographs for use in artistic advertisements. For example, it has just supplied a design for the advertisement, in the pages of *Leslie's Weekly,* of a famous breakfast food, and others are sought for autos, popular beverages, hotels, steamship and railroad lines, etc.

To encourage photographers to turn their attention to such subjects, *Leslie's Weekly* makes this prize offer:

For the best photograph suitable for use as advertisments now running in *Leslie's Weekly,* (though other advertising subjects are not barred) we will give a prize of $10; for the second, a prize of $5; those photographs receiving honorable mention will be purchased. The composition of such photographs should be simple, the picture should tell its own story, or, at least, suggest it with very little help from the title which accompanies it. The photographer is expected, however, to attach to each print which he submits (any number may be entered for the competition) such a title, together with the name of the article, business, etc., which the picture is intended to advertise. No copyright photographs can be received.

The competition will be closed on May 15.

Address all contributions in this contest to the Editor, Advertising Photographic Contest, *Leslie's Weekly,* 225 Fourth Avenue, New York City.

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The Photograph in Business.—Speaking to a friend, who is a large importer of embroidered and drawn work linens, the other day, I casually mentioned that I thought the sending of expensive samples by his correspondents abroad would cost him a great deal, considering that there were quite a few lines that he could not use, as, of course, he was charged with the value of samples and other costs necessary to put them before him. "Oh, no," he replied, "because we do not have samples sent to us until the design is approved," and here he reached behind his desk and drew out a book, opened it, and there on little loose cards, so as to preserve their numerical order, were pasted photographs of every class of embroidery work that had been submitted to him. Below the photo, carefully listed in order, were the names of the firms sending the photo, maker of the goods, price, duty and net landed cost. There was a place for selling price also, which was entered, of course, in code.

Every photo was listed and full data enterd, even though no order was placed for the material.

Continuing, he said, that it had proven of value, being a permanent record of all lines, even though some were obsolete, etc., that there was no necessity of having the desk littered with samples as the book would show the design, etc., and cost. "Of course," he went on, "the quality of the goods can only be determined by an actual sample, which I always call for before placing an order, choosing such a design from the photograph scrap book as I think desirable."

After leaving him I thought that, although to a great extent, the practice is followed in the machinery trade and other kindred lines, it could be used more generally than it is, especially where it is not feasible or desirable to send a catalogue. It brings to my mind a little experience of my own, which happened last spring. During that time, last April, I believe it was, I wished to purchase a small gasoline boat, and, of course, entered into correspondence with several firms manufacturing boats of that kind. In the course of a few days catalogues and form letters began

to materialize, lauding the particular make of boats the firm manufactured, but there was nothing to show what the boat would look like except the small cut in the catalogue.

One of the best letters I received and from the writer of which I eventually bought the boat, had enclosed a small unmounted photograph, nicely finished, of the boat. Somehow it looked to me better than a cut in the catalogue; it showed, at least, that it was not a drawing of a pretty boat drawn by an artist, and, although, it was a small thing, it was, at least, in this particular instance, a winning point.

The cost must have been small as the print was enclosed in a little rice paper envelope with a courteous request to return when through with it, printed on the outside.

In the majority of cases this is done and the same print may do duty many times before it is worn out.

It certainly seems to me that the photograph could be used to greater effect than it is at the present time in the commercial field.—R. E. King in *Moore's Monthly Messenger.*

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THE INDIANA ASSOCIATION OF PHOTOGRAPHERS will hold their next State Convention at Winona Lake, July 8th to July 12th, 1907. The following is the list of classes and awards.

Special Class, any size, style or number, the DeGuerre Memorial Institute Prize—best picture, "Diamond Medal of Honor."

Conditions of award—No picture shall be passed upon for this honor that is not properly titled.

Should the excellence of the picture chosen for this honor be judged not to be equal to the one chosen as the best at our last annual meet, then the Trustees reserve the right to retain the medal.

Publication and use of picture shall be under control of Trustees.

Pictures shall be passed upon by two distinct sets of judges, the one selecting a number of three to five pictures, the other selects the one. Any false claims made by winner of medal forfeits all honors, and at the request of Trustees the same shall be surrendered.

Honors are open to the world—Indiana only excepted.

Non-State Class, Association Prizes, any size, style or number.—First, Gold Medal; Second, Silver Medal; Third, Bronze Medal.

(All pictures in Special and Non-State classes, if considered of sufficient merit, will be selected to adorn the walls of DeGuerre Memorial Institute, and will be awarded a certificate.)

(No entrance fee for above classes).

Doehn Trophy—In charge of Otto Doehn, Indianapolis, who will furnish all information.

Rating Class—Six pictures, any size, Gold Button to all receiving rating not less than 80%.

RULES AND REGULATIONS.

1. Pictures shall be from negatives made since last convention.

2. All exhibitors must be members of the Association.

3. No manufacturer or dealer will be admitted on the convention floor, except floor space or desk room has been taken.

4. All exhibits must be addressed to H. E. Koch, Winona Lake, Indiana, care Indiana Association of Photographers, express prepaid, and must reach there by July 3d.

5. No exhibit will be hung until dues are paid J. O. Cammack, Treasurer, Greencastle, Ind.

6. All exhibits must be in the hands of the hanging committee not later than the morning of July 3d.

7. Have your return address on box. Screw lids on; do not nail them.

Further particulars may be obtained from J. Frank Cady, Secretary, Boonville, Ind.

* * * *

PHOTOGRAPHERS ASSOCIATION OF PENNSYLVANIA, APRIL 23, 24, 25.—The eleventh annual convention of the Photographers' Association of Pennsylvania, including West Virginia, Maryland, Delaware and the District of Columbia, will convene in Williamsport, Pa., April 23, 24 and 25, at the Park Hotel.

It has been the aim of the executive board to have an instructive and business convention.

We will have a great feature to offer at this meeting in the way of a school of photography, which will be conducted by the American Aristotype Co., of Jamestown, N. Y. They will have experts in all branches of the business to demonstrate and explain the latest and best methods of producing the finest kind of fine art photography.

No photographer within our territory can afford to miss this opportunity of seeing photographs made, from the making of the negative to the finished print by the most modern and up-to-date methods.

In our prize list I think we have a good one. Prizes for the big fellows and prizes for the little fellows, so that each can make an effort to win by sending his or her best work to be hung beside his or her fellow photographers' work and compare them, and see where each other lacks in this thing or that, for it is only by comparison of our work and exchanging of ideas do we advance, and by our prizes we hope to reward honest endeavor and merit.

Make a resolution now that you will attend this meeting. Look over our prize list; decide on which you will enter. Look over your negatives; pick out your best; make the best prints from them you can, and have them ready to send to Williamsport at the proper time; or if you do not find enough of what you consider fine ones go to work and make some, and, above all things, do your best, for only from your best can you get a good comparison.

If you are interested and desire further information, same be obtained by writing E. E. Seavy, Secretary, New Castle. Pa.

* * * *

Bargaining.—An Irishman who had started photography went into a shop to purchase a small bottle in which to mix some of his solutions. Seeing one he wanted he asked how much it would be.

"Well," said the chemist, "it will be twopence as it is, but if you want anything in it I won't charge you for the bottle."

"Faith, sor," said Pat, "then put a cork in it."—*Tit-Bits.*

* * * *

Photographic Exhibit of the Wyoming Valley Camera Club, Wilkesbarre, Penna. —The following are the conditions governing entries for the Sixth Annual Exhibition.

1. Only work which gives distinct evidence of artistic feeling will be acepted.

2. No pictures hung at any previous Wyoming Valley Camera Club exhibition will be accepted.

3. No more than ten entries will be accepted from any one exhibitor.

4. There will be no invited work and all prints submitted will be examined by the jury.

Note.—See exceptions under condition No. 5.

5. Every contributor's pictures must be numbered according to their own preference, i.e.: The best No. 1, the second best No. 2, etc.

(a) If the entries exceed the number that the jury can examine within a reasonable amount of time, the number of pictures submitted to them must, necessarily be cut down. Therefore the highest will be excluded, first, i. e.; from No. 10 to limit fixed by the jury. Thus every contributor will be his own preliminary jury.

(b) If every contributor's pictures are numbered we shall be able to draw some definite conclusions as to how the contributors standard of excellence compares with that of the jury.

6. Entries must be mounted and the title, name and address of the sender plainly written on the back of each. Framed or unmounted pictures will not be accepted.

7. Every contributor must pay the expense of forwarding to and from the exhibition.

8. Pictures will be returned as soon as practicable after the close of the exhibition, unless there be instructions to the contrary.

9. All entries must be delivered at the rooms of the Wyoming Valley Camera Club, No. 72 North Franklin street, Wilkes-Barre, Pa., U S. A., not later than April 1st, 1907.

10. A list of titles must be sent separately by mail, giving name and address of sender, price of each if for sale, and special instructions if any.

11. All work will be insured against loss by fire. For the purpose of effecting insurance all pictures not having a stated value will be insured at one dollar ($1.00) per print.

12. A commission of fifteen per cent. will be charged upon each sale made by the Wyoming Valley Camera Club.

13. There will be no awards.

14. Pictures which are accepted may not be removed before the close of the exhibition.

15. A catalogue will be sent to each exhibitor.

Any further information may be had from R. L. Litch, Secretary, 72 N. Franklin Street, Wilkes-Barre, Pa.

* * * *

Reciprocity in Business.—In a little town in Northern Pennsylvania—Athens by name—there is a photographer's establishment on Main Street containing the window-sign, "Tank-developer." Half a block farther on there is a sign across the pavement, "Gold Cure."—*Judge.*

THE CAUSES OF FOG.—One of the troubles that most frequently affects the amateur is surely fog in some form or another, and it is sometimes no easy matter to say what is the cause of it. Fog may arise from so many sources and causes. There may be a leak in the dark slide, light may get into the dark-room, the developing light may be unsafe, the plates may be stale or the developer may be wrong, and we may have some form of chemical fog. There may be fog on the plates before they are put into the slides from being stored in a bad place, though this is rare.

But provided the plates are fresh, it is always well to take the greatest care in loading. The red light, no matter how safe, should shine on the plates as little as possible, both while loading and while putting the plate in the developer.

It is wonderful what a plate will stand, and one gets in time to know what light may be ignored; one may change on summer nights when the moon is bright and the twilight scarcely gone, provided the faint rays are broken or reflected, whereas a mere flash from some dark-room lamps direct will fog. I have changed plates under many difficulties at one time or another (it is no joke changing 12x10's under the bed clothes of a Highland inn in full daylight, but I have done it without a trace of fog, and in the open when the room was flooded with bright moonlight); but it is best to take no risks and only do rash things when there is no alternative. A common cause of fog is to be found, especially in old or well used cameras, in some leak in the bellows or other part of the body of the camera. This may only be detected by a very careful search, and it is a good plan thoroughly to examine the camera now and then by capping the lens and, after removing the screen and covering the head and camera back tightly with the focussing cloth, turning the camera about in all directions in sunlight.

The best slides may leak a little in time, and they should always be covered when loaded and when in the camera.

Reflected light in the camera may come from places where the black has worn away, and in a sunlight exposure it may be bright enough to fog. A very wide angle lens may throw too much light on the bellows. But more probably the cause is under-exposure and a prolonged development, especially such as with pyro-ammonia, say.

But most cases of badly fogged negatives from the beginner's lot are due to carelessness in loading and in the dark-room; in the cases where, somehow or other, the plate has caught light between unpacking and the developing dish, the fog is in patches, while fog got during the action of development is pretty general.

It should be noticed whether the edges of the plate are fogged equally with the rest; where there is fog and yet the edges are clean, the evidence is plain that the fogging took place at least while in the dark slides. We may be always pretty sure of one thing, and that is, that the plates were all right when they left the factory. It must be very rare, nowadays, that the cause can be laid at the maker's door.

F. G.—*Focus.*

THE WANDERER. *By W. E. Bertling.*

Trade Notes

Here's a Chance to try the "E. Z." Developing Powders manufactured by Charles L. Mitchell simply for the asking. The advertisement in this issue will give you particulars for obtaining a free sample.

* * * *

Ralph J. Golsen is about to incorporate his business under the name of the Ralph J. Golsen Supply Co., to do business in lenses and photographic supplies at the new address, 58 Wabash Avenue, Chicago, Ill. Their new bargain list, No. 24, will be ready March 15th.

* * * *

An Invitation to the Aristo School of Photography is extended by George Murphy, Inc. A circular and program will be sent on request as per the offer in our advertising columns.

* * * *

The Mirmont Photo Paper Co. of Glendale, Brooklyn, N. Y., are now ready for business and are manufacturing a full line of their New York Photo Papers. They are offering special inducements to the professional photographer and it will be worth your while to write for prices.

* * * *

Mr. A. K. Boursault, formerly advertising manager of the C. P. Goerz American Optical Co., is now associated with the "Paris Modes" Magazine of New York City, as Business and advertising manager. Our best wishes go with him in his new position.

* * * *

We Have had the Pleasure of inspecting some prints made on the new Royal Velox Paper, and if the majority of the amateur photographers do not sit up nights making prints on this new paper, we miss our guess. Royal Velox is no different from the ordinary Velox paper, except that the emulsion is coated on a soft mellow toned stock, just a pleasant sufficiency of color to tone down the higher lights in a picture in a most entrancing manner. Royal Velox when redeveloped with the Velox Redeveloper affords the most exquisite sepia tones with all the brilliance and detail of the regular Velox print. Royal Velox is made in both regular and special grades and coated on a medium weight stock.

* * * *

Prominent in the line-up of Good Things for 1907 are the new Angelo Platinum papers. The Angelo papers have always had a reputation for quality, and uniformity, and under the new and greatly improved conditions of manufacture, bid fair to far excel their past record. Angelo Sepia Platinum has the great advantage of developing in a cold bath, doing away with the necessity of heating the bath for each batch of prints.

In using the cold bath, development is not instantaneous, thus affording much greater control in development. Even under the most trying conditions, there is no evidence of solarization of smoky shadows, the prints coming from the clearing bath clean and brilliant, with marvelous gradations from highest light to deep shadow.

Angelo Black and White Platinum papers recently introduced, possess every good quality of the Angelo Sepia papers, and are bound to win favor on merit alone from all exacting and discriminating photographers.

THE PHOTOGRAPHIC TIMES

An Illustrated Monthly Magazine Devoted to the Interests of Pictorial and Scientific Photography. Issued the first of each month

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All literary contributions, correspondence, "Queries," etc., should be addressed to THE EDITOR; all advertising matter to the Advertising Manager.

THE PHOTOGRAPHIC TIMES PUBLISHING ASSOCIATION,
39 Union Square, New York.

A GROWING IDEA.

The Kodak would probably have been valueless to Daniel Boone as a weapon to use against the denizens of the Ohio Valley forests a century and a quarter ago. Nevertheless the Nimrods of to-day are taking to it. Many of them find more satisfaction in photographing than in shooting the inhabitants of the woods.

Several interesting books on the subject have been published, the latest of which is "Hunting Big Game with Gun and with Kodak" (G. P. Putnam's Sons, New York) by William S. Thomas.

Mr. Thomas is an experienced sportsman, an easy writer and a good photographer. He does not, it is evident, delight in the wanton destruction of game, but rather in the spirit of the chase and of the woods. When the larder is full the rifle is laid aside for the Kodak, and his photographic trophies are evidently prized more highly than even those of the soft nosed bullet. The book is worth anybody's reading, but it especially appeals to those who are interested in photography.

There can be no doubting the present tendency of the people, in this country, at least, to get more good from the great out-doors. Mr. Thomas' book fosters that idea and makes a strong plea for the use of camera rather than rifle in the quest for big game.

"There are no game laws for those who hunt with a Kodak."

AT LAST.

A four by five Pocket Kodak with all the practical and comfortable convenience of the smaller preceding models. Step by step the Kodak system of picture making has smoothed the pathway of the amateur photographer, and made more and more enjoyable his wanderings afield by absolving him from burdensome apparatus. A four by five Folding Pocket Kodak could have been constructed some time ago—the demand was surely sufficient to warrant it—but it would not have been the ingenious triumph embodied in the 1907 No. 4 Folding Pocket Kodak.

All our lengthy experience in camera construction and Pocket Kodaks in particular, has been concentrated in this model—all the little conveniences and perfected mechanical adjustments, that while simple in themselves, go so far toward making the complete and perfect instrument.

The No. 4 Folding Pocket Kodak is in truth a *Pocket* Kodak, as it measures when closed, but 2¼ inches in thickness and 9 inches in length. Its equipment includes the rising and sliding front, automatic focusing device and new and improved spool pins. The optical equipment is superb; the lenses are specially selected rapid rectilinear of 6½ inch focus, with a speed of *f.* 8. The shutter is the F. P. K. Automatic with both bulb and finger release.

Taking the twelve, six and "Double Two" daylight loading film cartridges, and adapted to the use of glass plates when desired, the No. 4 Folding Pocket Kodak is the triumphant embodiment of the long cherished desire for a pocket four by five.

The price is $20.00.

Kodak Dry Mounting Tissue has solved the mounting problem.

JUST PRESS WITH A HOT IRON—THAT'S ALL.

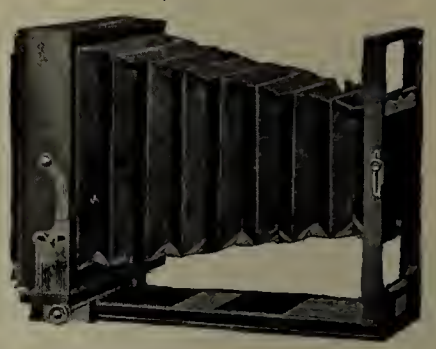
Three Unparalleled Cameras For The Commercial Worker

Empire State

A camera with extra long bellows draw and with complete equipment of double swing, reversible back, front and back focus, rising and falling front—an instrument suitable for any class of work. Strongly constructed to withstand hard knocks.

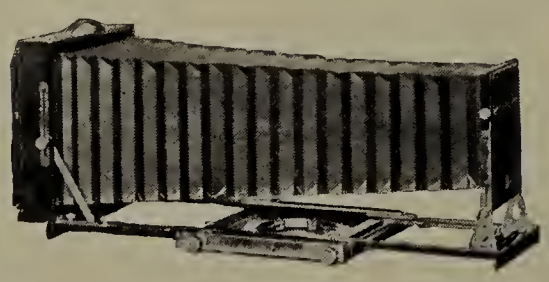
Price, including case and one holder	5 x 7 $21.00	6½ x 8½ $22.00	8 x 10 $25.00	11 x 14 $36.00	14 x 17 $60.00
Draw	22 in.	27 in.	30 in.	37 in.	48 in.

R. O. C. View



The cheapest view camera of efficiency ever placed on the market—can be used with great success in all work excepting that requiring extra long bellows—is built with the same care and attention to accurate adjustment, as any of our other cameras. A remarkable instrument at the price.

Price, including case and holder	5 x 7 $15.00	6½ x 8½ $16.00	8 x 10 $17.00
Draw	14 in.	15½ in.	17 in.



Premo View

The finest camera for commercial work ever offered. Made of best selected material and incorporating every patented device suitable for this style camera, which 25 years of experience has suggested. Provided with specially constructed case with room for the complete field outfit of the photographer.

Price, including case and holder	6½ x 8½ $52.00	8 x 10 $58.00
Draw	27 in.	30 in.

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